BIOSYSTEMS AND AGRICULTURAL ENGINEERING (BAE) GRADUATE PROGRAMS 2017-2018 ACADEMIC YEAR

THE DEPARTMENT OF BIOSYSTEMS AND AGRICULTURAL ENGINEERING OFFERS MASTER OF SCIENCE (THESIS AND NON-THESIS OPTIONS) AND PH.D. PROGRAMS

IF YOU ARE INTERESTED IN OBTAINING A GRADUATE DEGREE FROM BAE ….

Our department requires incoming graduate students to have an identified faculty advisor who is willing to guide the student's graduate program. Prospective students are therefore expected to identify a faculty member with similar research interests, and contact that faculty member directly to determine if that faculty member is taking on new graduate students during the semester in which the student would like to enroll.

If the faculty advisor is interested in advising a new student, we encourage the student to visit the department or at a minimum participate in a video call with their advisor before applying to the department. We also host a yearly Graduate Student Recruitment event in late January/early February which is an excellent opportunity to interact with several potential faculty advisors. Please see our home web page for current information on this event: www.uky.edu/bae.

Faculty Research Areas

Dr. Adedeji – Food Process Engineering
Dr. Agouridis – Bioenvironmental
Dr. Colliver – Controlled Environment
Dr. Crofcheck – Bioprocessing
Dr. Dvorak – Machine Systems Automation
Dr. Edwards – Bioenvironmental
Dr. Ford – Bioenvironmental
Dr. Hayes – Controlled Environment
Dr. Jackson – Controlled Environment
Dr. McNeill – Bioprocessing
Dr. Montross – Bioprocessing
Dr. Nokes – Bioprocessing
Dr. Peterson - Biomechanics
Dr. Sama – Machine Systems Automation
Dr. Shi - Bioprocessing
Dr. Stombaugh – Machine Systems Automation
Dr. Taraba – Controlled Environment

ADMISSION TO THE BAE GRADUATE PROGAM – PROCESS AND CRITERIA

The prospective student must apply to the graduate school through the on-line application. The link to the application may be found at the bottom of the following web page http://www.research.uky.edu/gs/ProspectiveStudents/Admission.html.

SUBMITTING AN APPLICATION

To complete the application you will need:

Transcripts: You will be asked to upload copies of transcripts from all higher education institutions attended and, in the case of domestic students, to self-report cumulative GPA's for each institution. **BAE requires an overall undergraduate grade point average of 2.8 (see exceptions sidebar) and 3.00 on all graduate work.** If you are offered admission and decide to enroll you will then be required to submit official transcripts to the Graduate School.

Test Scores: In most cases an official test score (either GRE or GMAT) is required for admission (see exceptions sidebar). You will be asked to self-report these scores on the application (you can also supply a future date for taking the test). We will however also require official scores from the reporting agency.

BAE has not set a minimum GRE score. We use this score as one piece of information among many to select students.

Exceptions: Provisional graduate admission status may be recommended by the Director of Graduate Studies in BAE for one or more of the following reasons:

- Missing transcripts or other requirements for admission such as letters of recommendation;
- Temporary waiver of the Graduate Record Examination (not to exceed one semester);
- Students with degrees in a field other than engineering;
- Deficiencies as determined by the Director of Graduate Studies;
- Students with an undergraduate GPA less than 2.8.

GRE scores should be sent directly to us from Educational Testing Service (ETS); the Institution Code for the GRE for UK Graduate School is R1837.

Scores for the Graduate Management Admission Test (**GMAT**) should be sent directly to us from the Graduate Management Admission Council (GMAC); the UK Graduate School code is 1837.

TOEFL or IELTS Scores: All applicants whose native language is not English will be asked to self-report one of these scores on the application. As with GRE or GMAT scores, we also require official language scores be sent to us directly from the reporting agency.

For the Graduate School, the minimum acceptable TOEFL score is 550 (paper-based), 213 (computer-based), or 79 (internet-based). The minimum IELTS score is 6.5. The BAE department requires a minimum TOEFL (internet-based) of 94 or an IELTS score of 7.0. Submitted scores must be no more than two years old.

Letters of Recommendation: BAE requires three letters of recommendation, preferably from people who know you well and can speak to your academic potential. You will be asked for the recommenders' contact information and the application management system will send a request directly to the person.

Once the application is complete, the BAE Director of Graduate Studies asks the Research and Graduate Studies Committee to review the application.

THE SELECTION PROCESS

The BAE department has a Research and Graduate Studies Committee (RGSC) who reviews the following materials for all applicants for their probability for success in our graduate program.

- ✓ The student's previous academic record. (Grades in science and math courses carry additional weight).
- ✓ Letters of recommendation.
- ✓ GRE and TOEFL (if applicable) scores.
- ✓ The availability of a major advisor to work with the prospective student.

If the RGSC agrees that the student meets our selection criteria, the Director of Graduate Studies formally recommends to the Graduate School that the student be admitted into the Departmental graduate program. The University of Kentucky Graduate School will then evaluate that student's application to ensure all the graduate school entrance requirements are met.

When the Graduate School has approved admittance, the department is notified and the student will receive a letter from the Department detailing the conditions of the student's admittance, and if applicable, the financial aid available.

The student confirms their desire to attend graduate school by an e-mail of acceptance to the Department Chair.

FINANCIAL AID – RESEARCH ASSISTANTSHIPS/TEACHING ASSITANTSHIPS

Research Assistants (RA) are paid a stipend, distributed over 12 months, and their tuition is paid (certain fees are the responsibility of the student as described on the graduate school web site under Tuition Scholarship/Billing Account Information at: http://www.gradschool.uky.edu/StudentFunding/tuition.html. In return, RAs are expected to work on research (assigned by the major advisor and may be related to your research but does not need to be) a minimum of 20 hours per week. RAs are expected to be in the department during working hours (8 am – 5 pm) whenever they are not in class for a total of 40 hours per week on average. RAs work on the University calendar, not the

academic calendar (University holidays plus 10 paid vacation days). Occasionally a RA will be requested to assist with a class to allow the student to gain teaching experience. Stipends are awarded for a maximum of two years for an M.S. and 3 years for a Ph.D. Exceptions to the stipend duration must be approved by the DGS and Department Chair.

Teaching Assistants are paid a stipend and their tuition is paid (certain fees are the responsibility of the student as described on the graduate school web site under Tuition Scholarship/Billing Account Information at: http://www.gradschool.uky.edu/StudentFunding/tuition.html. In return, TAs are expected to teach a section of a course, including grading and interacting with the students. TAs are paid only during the semesters in which they teach. The BAE department does not have teaching assistant support.

OBTAINING A RESEARCH ASSISTANTSHIP

Two types of research assistantships are available: grant-funded and department-funded. The major advisor distributes grant-funded assistantships, and so the advisor is the first person to ask about potential support. The department has some competitive assistantships for students whose major advisor does not have grant-funded assistantships available. To qualify for the departmental research assistantships you must have submitted your completed application by **March 15th for Fall semester** admission, and by **August 22nd for Spring semester** admission. Exceptions may exist, so please talk to the Department Chair if you have missed these deadlines. Students will be notified as to whether or not they will be receiving a departmental assistantship before May 1st and October 15th for Fall and Spring semester admission, respectively.

STIPEND AMOUNTS AVAILABLE

BAE's minimum research assistantship is $16,000 per year for an M.S. student and $18,000 per year for a Ph.D. student, paid bi-weekly. If the stipend is supported by grant funding the amount may be greater, depending on the amount of money available; speak with your major professor. Competitive fellowships are available to supplement or substitute for an assistantship, both at UK and from federal agencies, however the student is responsible for pursuing these options. Students with undergraduate degrees other than engineering must have completed all of the Tier 1 courses (described below) prior to being eligible for a departmental assistantship.

UNDERGRADUATE DEGREES OTHER THAN ENGINEERING

Students who enter a M.S. or Ph.D. program but do not have a B.S. degree in an engineering discipline (or equivalent coursework as determined by the Biosystems and Agricultural Engineering Department's RGSC) are required to complete a program of coursework that will provide them with a baseline of knowledge and competencies that are consistent with B.S. engineering graduates. ***Note: Before you embark on Tier 1 courses it is essential that you have a written commitment from a faculty member in the department that they are willing to serve as your major advisor once you have completed your Tier 1 courses.**

TIER 1 REQUIRED COURSES

The courses listed in the Tier 1 box (totaling 32 credit hours) constitute the baseline coursework required of non-engineering students. These courses do not count toward the student's graduate degree coursework.

TIER 2 REQUIRED COURSES (CHOOSE FIVE OF THE SEVEN)

Working in conjunction with their major advisor, the student will also select the most relevant five courses from the courses in the Tier 2 box. Advisors and advisory committees may also require additional courses as deemed appropriate. These courses do not count toward the student's graduate degree coursework.

CREDIT FOR PRIOR UNDERGRADUATE COURSEWORK

The Biosystems and Agricultural Engineering Department's RGSC determines credit for prior undergraduate coursework. The RGSC will review the student's transcript for equivalent Tier 1 and 2 courses. Prior courses judged equivalent will be used to fulfill the corresponding baseline requirements, and the student will not be required to retake those courses. The student is responsible for providing course catalogs or other material required by the RGSC to assess equivalence. The RGSC will include the results of their assessment with their admission recommendation to the Director of Graduate Studies (DGS) (see included worksheet – Appendix I).

Tier 1 Courses

College Calculus I	4
College Calculus II	4
College Calculus III	4
Differential Equations	3
General College Chemistry I	4
General College Chemistry II	3
General University Physics I	4
Physics I Laboratory	1
General University Physics II	4
Physics Laboratory II	1

Tier 2 Courses

Course	Credits
Statics	3
Mechanics of Deformable Solids	3
Dynamics	3
Thermodynamics	3
Heat Transfer	3
Fluid Dynamics	3
Electrical Circuits and Electronics	3

TRANSFERRING GRADUATE CREDITS TO UK

A maximum of nine semester hours or twenty-five percent of the semester hours required for the degree concerned, whichever is greater, of regular graduate course credits completed at an accredited university, may be credited toward the minimum requirements of a graduate degree. The following rules apply: course credits applied toward a previously awarded graduate degree cannot be transferred; transfer of independent work, research, thesis or dissertation credit is not permitted; only courses assigned a B grade or better can be transferred; short courses lasting fewer weeks than the number of credits may not be transferred; students must be in good academic standing at the time of transfer; courses must have been taken in graduate status.

HOUSING FOR GRADUATE STUDENTS

Information about on-campus graduate student housing may be found at: www.uky.edu/housing/graduate-family/campus-housing. In general most of our graduate students live off campus; the exception being new international students. The choices in off-campus housing are diverse, and each student's situation should be taken into consideration when selecting the appropriate housing. For example, will the student have his/her own transportation, or ride the bus or a bike? Does the student want to avoid undergraduate hotspots? How much is the student comfortable paying for rent? Current graduate students are our best resource for helping new students find housing. Dr. Alicia Modenbach (alicia.modenbach@uky.edu) can put future students in touch with our current graduate students.

WHOM TO CONTACT FOR MORE INFORMATION

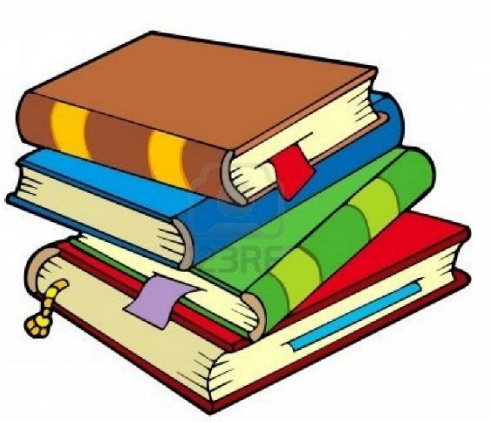
General information about graduate study in the Biosystems and Agricultural Engineering Department can be obtained from the Director of Graduate Studies (Dr. Donald Colliver; dcolliver@uky.edu) or our Student Services Coordinator (Dr. Alicia Modenbach; alicia.modenbach@uky.edu). You may also contact the Department Chair (Dr. Sue Nokes; sue.nokes@uky.edu).

THE GRADUATE SCHOOL EXPERIENCE

Each graduate student's experience is individualized, however there are definite guidelines to assist with structuring the process. It is expected that M.S. students beginning their graduate work with a B.S. in engineering will take 2 years to complete their degree, while Ph.D. students beginning their graduate work with a M.S. in engineering will take 3 years to complete their degree.

GRADUATE COURSEWORK

Typical BAE graduate coursework combines courses in Biosystems and Agricultural Engineering, mathematics, statistics, other engineering fields, the physical sciences and the biological sciences. The student will meet with his/her major professor upon embarking on their graduate program to determine which classes he/she will take.



The courses to be taken as a M.S. student must be selected in consultation with your major advisor and the courses must comply with the rules detailed in the plan of work (Appendix II). The EXCEL file for the plan of work may be found on the BAE website at https://www.uky.edu/bae/sites/www.uky.edu.bae/files/ms%20plan%20in%20excel.xls. The M.S. requires a minimum of 24 graduate credit hours. *M.S. students are required to have their plan of work approved by their major advisor and the DGS before the end of the first semester of their graduate work.*

The Ph.D. requires a minimum of 30 course hours (not residency credit) past the Master's degree (note: the student's advisory committee can require more credits), with the potential of waiving up to 6 hours with the concurrence of the a) student's advisory committee, and b) the DGS, and c) the Department Chair. The policy for waiving credits is in Appendix III and the form may be found on the BAE web page at https://www.uky.edu/bae/graduate-program. We expect each Ph.D. student to have at least one advanced math course (past the BS) and at least 4 semester credit hours of statistically-based courses, with at least one course covering experimental design. The courses are selected to develop quantitative physical and engineering understanding, particularly in the subject area of the dissertation. Credit is not given for thesis activity in meeting this requirement. *Ph.D. students are required to have their plan of study reviewed and approved by their advisory committee and the DGS during the second semester (prior to preregistration for the third semester) of their Ph.D. work.*

RESEARCH REQUIREMENTS

The M.S. (except for the Plan B Master's degree) and the Ph.D. are research degrees awarded for significant creative research or design accomplishment. Therefore the thesis (M.S.) or dissertation (Ph.D.) are the crowning achievements of the graduate program.

M.S. ADVISORY COMMITTEE

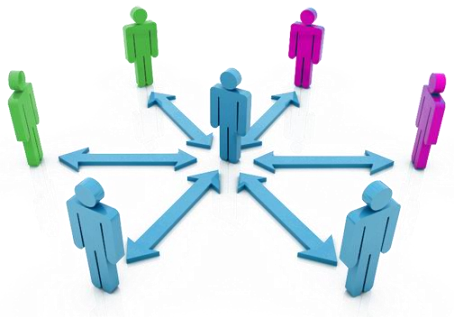
There are no formal requirements from the Graduate School for the advisory committee for the M.S. degree. However, the Department of Biosystems and Agricultural Engineering requires the examining committee to be formed during the **first semester** of study so that the examining committee can serve as an informal advisory committee. The major advisor in consultation with the student selects the advisory committee. Professional courtesy is for the student (working with his/her major advisor) to ask the committee member if they are willing to serve on the committee before assigning that person to the student's advisory committee.

The examining committee is to consist of three to five qualified members with at least one having full graduate faculty membership and a second having either associate of full graduate faculty membership. At least one member must be from outside the Department of Biosystems and Agricultural Engineering. [Note: this requirement may be waived for extreme circumstances with the approval of the DGS and the Department Chair].

PH.D. ADVISORY COMMITTEE

The major professor, in consultation with the student, selects the Advisory Committee and submits the recommendation to the Director of Graduate Studies using the Doctoral Advisory Committee Form (which may be found by logging in here: http://www.research.uky.edu/cfdocs/gs/DoctoralCommittee/Selection_Screen.cfm. Upon approval of Director of Graduate Studies, the request is forwarded to the Graduate School Dean for approval and the official appointment of the major professor and Advisory Committee.

The Advisory Committee provides advice to the student and specifically sets requirements, acting within applicable Program, Graduate School, and University regulations, which the student must meet in pursuit of the doctorate degree. The student has the responsibility of interacting with the committee (in consultation with the major advisor) and keeping them informed of his or her progress.



The Advisory Committee has a core of four members. This core consists of the major professor as chair, and two other members from the major area (i.e. three members from BAE). At least

one representative must be from outside the academic program (department). All members of the core must be members of the Graduate Faculty of the University of Kentucky and three (including the major professor) must possess full member Graduate Faculty status. Additional faculty members may serve as members of the Advisory Committee. The core of the advisory committee must be kept at its full complement throughout the graduate career of the individual student. Thus, in the event of a vacancy on the committee (occasioned by resignation, faculty leave, or inability to serve), an appropriate replacement must be made (officially, by submitting a Doctoral Advisory Committee Modification Request) prior to any subsequent committee decisions.

The Graduate School will assign an outside examiner for the dissertation defense. This person may be recommended by the major advisor, but the assignment is at the discretion of the Graduate School. The purpose of the outside examiner is to ensure all graduate rules are followed and the student receives a fair exam.

EXAMPLE PROGRAM TIMELINE (DETAILS DIFFER; EACH STUDENT SHOULD WORK WITH THEIR MAJOR ADVISOR TO DEVELOP THEIR TIMELINE

THE M.S. TIMELINE

Prior to the First Semester

- Choose your major advisor
- Approximately 1 week before classes start arrive on campus
- Meet with major advisor and select classes
- Register for classes, including BAE 775

First Semester

- Choose your research topic
- Choose your committee
- Finalize your Plan of Work (be sure it satisfies all the requirements of the Graduate School, your major professor, and your Committee)
- Submit signed Plan of Work to DGS
- Focus on coursework
- Begin your research proposal
- Mid-semester register for second semester classes, including BAE 775

THE PH.D. TIMELINE

Prior to the First Semester

- Choose your major advisor
- Approximately 1 week before classes start arrive on campus
- Meet with major advisor and select classes
- Register for classes, including BAE 775

First Semester:

- Choose your research topic
- Choose your committee
- Focus on coursework
- Begin your research proposal
  Mid-semester register for second semester classes, including BAE 775

Second Semester

- Complete your Proposal (Literature Review, Problem Description, Hypothesis, Experimental Methods, Discussion of Expected Results)
- Obtain major advisor's approval on proposal
- Submit proposal to DGS
- Give Entrance Seminar

Summer

- Conduct preliminary experiments

Third Semester

- Finish your coursework or register for BAE 748 (0 credits) if you have finished your coursework
- Continue your research
- Begin writing thesis (be sure to use the Graduate School guidelines and follow the Instructions for Preparation of Thesis)
- Be aware that there are several important deadlines **months before** you plan to defend

Fourth Semester

- Complete request to graduate
- Register for BAE 748 (0 credits) if you have completed your coursework
- Complete your experiments
- Complete data analysis
- Present Exit Seminar
- Complete and defend your Thesis
- Graduate

Second Semester

- Continue working on your Proposal (Literature Review, Problem Description, Hypothesis, Experimental Methods, Discussion of Expected Results)
- Submit approved plan of study to DGS before pre-registration for next semester.
- Continue taking courses

Summer

- Collect preliminary data

Third Semester

- Complete your proposal
- Meet with your committee and present proposal, organize qualifying exam
- Obtain major advisor's approval on proposal
- Submit proposal to DGS
- Present Entrance Seminar
- Complete coursework

Fourth Semester

- Register for BAE 767 (2 credits)
- Take Qualifying Exam within first 6 weeks of the semester
- Start accruing Residency Credit
- Begin writing dissertation (be sure to use the Graduate School guidelines and follow the Instructions for Preparation of Thesis)

Summer

- Conduct research
- Begin looking for academic positions

Fifth Semester

- Register for BAE 767
- Continue your research
- Continue writing dissertation (be sure to use the Graduate School guidelines and follow the Instructions for Preparation of Thesis)

- Be aware that there are several important deadlines **months before** you plan to defend

Sixth Semester

- Complete request to graduate
- Register for BAE 767
- Complete your experiments
- Complete data analysis
- Present Exit Seminar
- Complete and defend your Dissertation
- Graduate

APPENDIX I: PROCESS FOR DETERMINING BACKGROUND COURSES FOR THE NON-ENGINEERING B.S. STUDENT

1. Research and Graduate Studies Committee (RGSC) receives application from non-engineering student.
2. RGSC arrives at recommendation for admission.
    a. If "Do not admit," stop.
    b. If "Admit," go on to Step 3.
3. Compare baseline coursework listing to student's transcript to determine unfulfilled baseline coursework [form follows in this Appendix].
4. Forward results of Step 3 to DGS with admission recommendation.
5. Contingent on identification of advisor, availability of funding, and acceptance of offer (as appropriate), DGS recommends to the Graduate School that the student be admitted on "Conditional" status, contingent on completion of specified unfulfilled baseline coursework. [Note: The student is eligible to apply for a Departmental RA after completion of all Tier 1 courses].
6. Student and advisor develop plan of study that accounts for unfulfilled baseline coursework and graduate degree program coursework, and submit to the DGS no later than the end of the first enrolled semester for review and filing.
7. Student completes coursework, notifies advisor, who notifies the DGS.
8. DGS verifies completion of unfulfilled baseline requirements, initiates a change in status to "Regular," and notifies the major advisor when this process is complete.

BASELINE COURSEWORK ASSESSMENT WORKSHEET FOR NON-ENGINEERING GRADUATE PROGRAM APPLICANTS*

(To be forwarded with admission recommendation)

BAE Requirement	**Credits**	**Prior/Equivalent Course***	**Credits**
----------Tier 1: Complete All----------			
CHE 105	4		
CHE 107	3		
MA 113	4		
MA 114	4		
MA 213	4		
MA 214	3		
PHY 231	4		
PHY 232	4		
PHY 241	1		
PHY 242	1		
Subtotal	*32*		
----------Tier 2: Complete Five of Seven----------			
EM 221	3		
EM 302	3		
EM 313	3		
ME 220	3		
ME 325	3		
CE 341 or ME 330	4 or 3		
EE 305	3		
Subtotal	*15-16*		
Total	**47-48**		

*Students without an entry in the "Prior/Equivalent Course" column are required to include these courses in their plan of study in addition to graduate degree program courses and must complete them prior to admission under "Regular" status.

APPENDIX II: EXAMPLE FOR M.S. PLAN OF WORK

NOTE: THE COURSES WILL NOT BE THE ONES LISTED BELOW – THIS IS JUST AN EXAMPLE

MS Graduate Plan of Study for				Jane/John Doe					
Degree Plan (A or B):	A								
Enrolled:	FA 17								
Grad. Date:	SP 19								
Advisor:	Shi								
Semester/Year	**Prefix**	**Number**	**Credits [1]**	**TITLE**	**Graduate Credits[2]**	**Regular Credits[3]**	**>600 Credits[4]**	**Core Credits[5]**	**Core >600[5]**
FA 17	STA	570	3	Basic Statistical Analysis	3	3			
FA 17	BAE	504	3	Biofuels Production and Properties	3	3		3	
FA 17	BAE	775	2	Professional Practices Seminar	2	2	2	2	2
FA 17	BAE	549	3	Advanced Bioprocessing/Food Engineering	3	3		3	
FA 17	BAE	648	3	Intrumentation	3	3	3	3	3
SP 18	BAE	750	3	Life Cycle Analysis	3	3	3	3	3
SP 18	BAE	775	2	Professional Practices Seminar	2	2	2	2	2
SP 18	STA	671/672	4	Experimental Design/Linear Regression	4	4	4		
SP 18	BAE	XXX	2	BAE Elective	2				
Plan Totals:			**25**		**25**	**23**	**14**	**16**	**10**
CPE Required Credits:			**24**		**24**	**16**	**12**	**12**	**9**
				Additional Credits Required:	*None*	*None*	*None*	*None*	*None*

(1) Enter 0 for zero-credit courses (e.g., BAE 748, BAE 775, BAE 795)
(2) Plan A requires 24 credits, Plan B requires 30 credits.
(3) Courses with regularly-scheduled classroom lectures. Includes BAE 599, BAE 625 and BAE 750 **only** if they are taught as regular lectures.
(4) Courses at the 600 or 700 level.
(5) BAE (except 4XXG) and cross-listed courses.
(6) BAE courses at the 600 or 700 level.

Student Signature and Date: _____

Advisor Signature and Date: _____

APPENDIX III: POLICY ON WAIVING CREDITS FOR THE PHD DEGREE

College of Engineering

Ph.D. Course Waiver Petition Form
Biosystems and Agricultural Engineering

College of Engineering

The Ph.D. requires a minimum of 30 graduate credit hours (excluding residency credits) beyond the M.S. degree or, if a M.S. degree is not pursued, 54 graduate credits beyond the B.S. degree. On petition to the Director of Graduate Studies (DGS), up to six credit hours of the Ph.D. requirement may be waived with the concurrence of (a) the student's advisory committee chair/co-chairs, (b) the majority of the student's advisory committee, (c) the DGS, and (d) the Department Chair. Graduate credit waivers may be approved based on:

- Scientific papers (e.g. refereed journal articles and book chapters) for which (a) the student is first or second author, (b) the paper is written while the student is enrolled in the department's Ph.D. program, (c) the paper is based substantially on data collected and/or work performed during enrollment, (d) the paper is submitted to an appropriate, peer-reviewed, professional journal or publisher, and (e) the editor has formally accepted the paper for publication. Up to three graduate credits may be waived for each scientific paper.
- Competitive state or federal grants or fellowships for which (a) the student makes a substantial contribution to the development of the grant (e.g. ideas originate with the student and student develops first draft) and (b) the grant is written and submitted while the student is enrolled in the department's Ph.D. program. Up to three graduate credits may be waived for each submitted competitive grant or fellowship.
- Intellectual property, deemed appropriate for provisional patent by the University of Kentucky, for which (a) the student is named an inventor, and (b) the intellectual property was developed while the student is enrolled in the department's Ph.D. program. Up to three graduate credits may be waived for each intellectual property.
- Non-academic engineering design experience that is (a) relevant to the student's area of study, and (b) consistent with professional standards of competency. Up to three credit hours may be waived for each fulltime year of experience.
- Teaching a semester long three credit hour course for which (a) the student is the primary instructor, (b) is relevant to the student's area of study, and (c) is taught while the student is enrolled in the department's Ph.D. program. Up to three graduate credits may waived for each course.

Students may receive credit in more than one area. Petitions for waiver of graduate credit should include all supporting documentation, including the Ph.D. Course Waiver Petition Form, in a single PDF file. The student is responsible for obtaining any necessary approvals if supporting documentation contains proprietary information in any of the petition categories. Please contact the DGS if the petition proposes use of proprietary information. Petitions should be made at least one semester prior to the Ph.D. qualifying examination. The review process will require approximately four weeks.

Approved: November 9, 2016

Student Name: _____

Ph.D. Advisory Committee Chair/Co-Chair: _____

Ph.D. Committee Members: _____

_____

Category (check one):

☐ Scientific Paper ☐ Grant/Fellowship ☐ Intellectual Property

☐ Design Experience ☐ Instruction

Credit Hours Requested (check one):

☐ 1 credit hour ☐ 2 credit hours ☐ 3 credit hours

Supporting Documentation:

Scientific Paper
☐ Justification ☐ Statement of Acceptance ☐ Galley Proof

Grant/Fellowship
☐ Justification ☐ Grant Application ☐ Statement of Submittal

Intellectual Property
☐ Justification ☐ IP Application ☐ Statement of Acceptance

Design Experience
☐ Justification ☐ Design Reports, Drawings, etc. ☐ Reference Form

Instruction
☐ Justification ☐ Syllabus ☐ Sample Lesson Materials

Date of Application: _____

Student Signature: _____

Advisor Signature: _____

Co-Advisor Signature: _____

Director of Graduate Studies Signature: _____

Department Chair: _____

REFERENCE FORM

This form must be submitted for each engagement claimed as qualifying design experience.

PART A – TO BE COMPLETED BY THE STUDENT

I, the student, hereby demonstrate qualifying design experience that is relevant to my area of study and is consistent with professional standards of competency.

Student Name: _____

Area of Study within BAE: _____

Engagement Number: _____

Employment Dates (MM/DD/YYYY): _____

Total Time Worked in Months (for this engagement): _____

Employer, Employer's Address, and Student's Title: _____

Reference, Reference's Title, Reference's Address, Reference's Email, and Reference's Phone (including area code and extension): _____

Description of Engineering Tasks and Duties:

Level of Responsibility:

Description of Engineering Decisions Made:

Projects:

REFERENCE FORM

PART B – TO BE COMPLETED BY THE REFERENCE

My relation with the Student has been/is: (check all that apply)
☐ Employer/Supervisor ☐ In Responsible Charge*
☐ Co-Worker/Associate* ☐ Reviewed Work* ☐ Other*

Do you verify the Student's experience on Part A? ☐ YES ☐ NO

Have you personally seen and reviewed the Student's engineering work? ☐ YES ☐ NO

Do you consider the Student's design experience to be within the stated area of study? ☐ YES ☐ NO

Do you consider the Student's design experience to be consistent with professional standards of competency? ☐ YES ☐ NO

*Explain in detail all responses marked with an asterisk. Attach additional sheets if needed.

_____

_____

_____

_____

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_____

_____

I certify that these statements are true and correct to the best of my knowledge and that I have personally reviewed and examined the student's engineering work.

Signature of Reference: _____ Date: _____